NORTHERN ROCKIES
CONSERVATION
COOPERATIVE

Conservation for the Common Good

– Since 1987 –

Photo: Townsend Collective

2020 YEAR IN REVIEW

DEAR FRIENDS,

This year has offered us an opportunity to learn from each other, look closely at ourselves, and see the shared human fabric that is being stretched in ways most of us haven't experienced in our lifetimes. NRCC has always worked to foster cooperation and mutual support. We remain, at our core, a cooperative of people who want a world where humans and landscapes thrive. In a time of global turmoil, with increasing distrust in our ability to communicate and work with one another, it's never been more important to build networks of people, to give them a platform to share their approaches, and to continue to amplify the goal of human-nature coexistence. This pandemic has shown that a virus from a wildlife market can fundamentally rearrange all our lives. The time is ripe for humans to see themselves within nature, a call NRCC has been making since its founding.

In a world that is much different than when it was founded in 1987, NRCC remains a leader in making sense of the complex problems of our times. In 2020, NRCC made a number of contributions. We started a summer webinar series, Lessons from the Field in a Time of Rapid Change & Crisis (highlighted in the center feature article of this publication); developed a problem-solving group with Teton County Leaders; started a project in partnership with Jackson's local radio station, called Voices of Jackson (available soon as a podcast); continued to support multiple projects on species of concern, coexistence initiatives, citizen science and environmental communication; and began plans for the next Jackson Hole Wildlife Symposium.

This publication includes an article by NRCC co-founder, Dr. Susan Clark, in which she describes the "opportunity" before us as a way to advance two key principles: to ensure justice for citizens whose basic rights have been denied and to secure a healthy environment for ourselves and our children. She writes, "These two principles are about who we are as humans – how we want to see ourselves and treat each other – and what our relationship to nature and wildlife should be." Dr. Clark explains the need to embrace the new complexity in our world, and offers an alternative path for "how we live and act."

Artist-in-Residence Katie Shepherd Christiansen further develops this vision by explaining how art is an act of translation about how we see our world, and it is in the interpretation of our world where conflict between values creates the environmental problems we face today. She writes with a humble sensitivity that it is the work of all of us to understand the "deep chasm between our values today and the practical thinking required for our survival."

Jess Greenburg, an Intern with NRCC for the past year and a half, completed a research project this summer on food insecurity in the Greater Yellowstone Ecosystem. This work is especially vital since sustainable food systems have been neglected in historic discussions of GYE environmental health and 2020 has emphasized the crucial link between human and environmental health.

Visiting Researcher Bryce Powell and Intern Bea Portela report on their year-long effort to better understand perceptions held by members of the Jackson recreation community and the impact of these viewpoints on the local ecosystem. Their results reveal the motivations shared by recreational communities, and how those perceptions can vary when defining own's one motivation versus describing others. The goal of this research is to inform a more nuanced understanding of the meaning of recreation for different people.

Also in this issue, we honor the lifelong conservation work of Dr. Roderick Drewien, introduce our new Research Associates and Project Partners – Hilary Byerly, Aida Farag, and Andrew Ray, and highlight the important work our Interns Elsa Rall and Nina Moore accomplished in communicating NRCC's work.

Many thanks to all the individuals and collaborating organizations who share our vision of a world where humans live in meaningful and attentive relationships with wildlife and landscapes.

Best regards,

Peyton Curlee Griffin Ben Williamson

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BY THE NUMBERS

39 ACTIVE PROJECTS

49 RESEARCH ASSOCIATES

74 INTERNS / STUDENT RESEARCHERS

66 PARTNERING ORGANIZATIONS

12 STATES AND **14** COUNTRIES
LOCATIONS OF PROJECTS IN LAST FIVE YEARS

26 AVERAGE NUMBER OF EMPLOYEES ON PAYROLL LAST FIVE YEARS

$633,990 AVERAGE ANNUAL INCOME IN LAST FIVE YEARS

49 TOTAL NUMBER OF WORKSHOPS & CONFERENCES

95% PERCENT SPENT ANNUALLY ON PROGRAM

33 YEARS OF LONGEST-RUNNING PROJECT
(Michael Whitfield's Bald Eagle study)

62 PROJECTS SUPPORTED IN THE LAST FIVE YEARS

NRCC Welcomes New Researchers and Partners

NRCC is pleased to welcome Hilary Byerly and Aïda Farag as Research Associates, and Andrew Ray as a Project Partner. Hilary, Aïda and Andrew bring valuable leadership, research, policy, organizational and communication skills to NRCC.

RESEARCH ASSOCIATES

DR. HILARY BYERLY is a behavioral economist who studies how people manage the natural environment, especially providing public benefits, like biodiversity and risk mitigation, from private lands. She is currently a postdoc at the Institute of Behavioral Science at the University of Colorado. Hilary earned a Ph.D. from the Rubenstein School of Environment and Natural Resources at the University of Vermont as a Gund Fellow at the Gund Institute for the Environment. She holds a M.S. in applied economics from Cornell University and a B.A. in environmental studies and international affairs from the University of Colorado, Boulder. She is based in Jackson, Wyoming.

DR. AÏDA FARAG is Station Leader of the U.S. Geological Survey – CERC Jackson Field Research Station. She works with management agencies, states, universities and the private sector to ensure that sound scientific knowledge is available for critical decisions about natural resources. She received a B.S. from Indiana University, and an M.S. and Ph.D. from the University of Wyoming where she was awarded a Department of Energy Traineeship/ fellowship. Her research defines the health of aquatic resources impacted by anthropogenic disturbances. She is based in Jackson, Wyoming.

PROJECT PARTNER

DR. ANDREW RAY is an Ecologist with the National Park Service. His work supports long-term amphibian and wetland monitoring in Grand Teton and Yellowstone National Parks and water quality monitoring throughout the region. His interest is in exploring how we can better integrate regional agency, NGO, and university science efforts and apply a more collaborative approach to ecosystem monitoring. He earned his Ph.D. from Idaho State University, a M.S. from Northern Michigan University, and a B.S. from Purdue University. He is based in Bozeman, Montana.

WANT TO SUPPORT NORTHERN ROCKIES CONSERVATION COOPERATIVE AND STAY WARM AS THE TEMPERATURES DROP?

Check out these new custom handknit hats from Research Associate Hannah Jaicks and Mark Ollenburger.Hannah and Mark started Bears Den Essentials during quarantine as a way to nurture their love of knitting and design, and they combined their talents to create custom handknit hats for organizations that support the places, wildlife, and people of the West that they love. Inspired by the colors of the Grand Teton photograph by NRCC's talented Photographer in Residence R.J. Turner, the NRCC hat is warm, soft, and one-of-a-kind. Order yours at etsy.com/shop/BearsDenEssentials or email bearsdenessentials@gmail.com. The NRCC hat can be made in any size, from youth to adult large. 12% of the proceeds from every hat sold goes directly to NRCC and allows Hannah and Mark to give back and support the incredible work of the NRCC community. Order yours today!

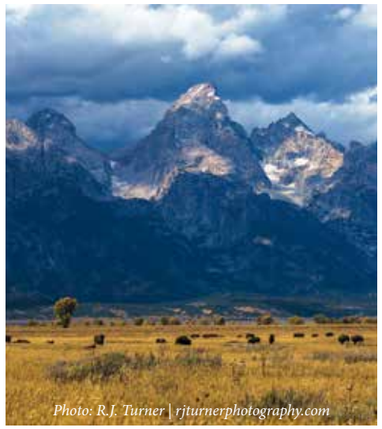


Photo: R.J. Turner | rjturnerphotography.com

PLANS FOR THE 2021 JHWS WILL BE ANNOUNCED ON OUR WEBSITE SOON:

NRCCOOPERATIVE.ORG

STAY TUNED!

Roderick 'Rod' Drewien Earns Lifetime Achievement Award

This past winter, NRCC and the Meg and Bert Raynes Wildlife Fund presented a Lifetime Achievement Award to Dr. Roderick 'Rod' C. Drewien. This award recognizes Rod's outstanding commitment and dedication to the conservation of wildlife in the Greater Yellowstone Ecosystem. Over his 54-year career, Rod worked effortlessly to ensure the protection of sandhill cranes and many other bird species. Rod's contribution to wildlife and science is highly respected by the researchers and managers who have had the privilege to work with him over many years. Rod currently resides in Blackfoot, Idaho.

Born in Salinas, Calif., in 1939, as a child Rod roamed the hills and wetlands in search of wildlife and adventure. After service in the Air Force, Rod went on to receive an undergraduate degree from Humboldt State in 1964, a master's from the University of South Dakota in 1968, and a doctorate from the University of Idaho in 1973.

Throughout his career, Rod worked with many agencies, studying migratory birds from the Arctic to southern Mexico. Much of his research was foundational, often providing the first documentation of the behavior, migratory traditions, pathways, and seasonal habitats of many species.

Rod is best known for his work with sandhill and whooping cranes. From 1969-2016, he studied sandhill cranes in the Rocky Mountain region, documenting their year-round ecology. His studies of crane mortality on nesting, wintering, and migrational resting areas have been integral to the establishment of protection measures used by managers in the region.

Rod also studied trumpeter and tundra swans, three species of geese, ducks, and other migratory birds. In the 1990s, along with his colleague and wife, Ruth Shea, his leadership in capturing trumpeter swans in an icy Idaho river in frigid winter conditions, enabled wildlife managers to successfully rebuild the damaged winter distribution of Rocky Mountain trumpeter swans.

Rod was also a mentor to many younger researchers and wildlife managers. Renee Askins, author of the book *Shadow Mountain*, worked in 1982 as a field volunteer for Rod. She summarized his work and contributions in the following excerpt:

"Behind so many endangered species stories are the heroic efforts of a person or persons who devote their lives with fierce singularity to the fate of that species. With chimps it is Jane Goodall, with mountain lions Maurice Hornocker, with gorillas it was Dian Fossey, and, in the early '80s, with cranes it was Roderick Drewien. The Grays Lake project was the brainchild of this delightful man, a rosy-cheeked biologist with twinkling eyes, an easy laugh, and an irresistibly infectious passion for his birds."

2020 NRCC Interns

NRCC virtually hosted three interns this past summer and fall. Jess Greenburg, Elsa Rall, and Nina Moore joined the NRCC team to improve the quality of our digital platforms. Each brought unique perspectives and individual skills to improve NRCC's outward-facing communications. Thank you to Jess, Elsa, and Nina for their creativity and dedication to communicating NRCC's work!

JESS GREENBURG designed and revamped NRCC's website. She updated the format and content, and reorganized the web pages. Jess also completed a research project on food security in western Wyoming. Her final report can be found on page 10. Jess is a senior in the Environmental Studies program at Ursinus College. She's passionate about intersectional environmentalism, food sovereignty, and habitat conservation. When she's not working or studying, you can find her rock climbing or in the water.

ELSA RALL was a summer AmeriCorps member through the Teton Science School. Elsa updated NRCC's social media platforms, grew our followership, and began the popular #WildlifeWednesday series. She also collaborated with NRCC Research Associates to communicate their research and the impacts of Covid-19 on their work. Upon completion of her internship, Elsa began a Master's degree in American Studies at William & Mary, where she is researching the intersection of women pioneers in the Adirondacks and the Greater Yellowstone Ecosystem.

NINA MOORE was a fall AmeriCorps member through Teton Science School. Nina helped to further develop NRCC's social media and digital platforms. Nina is interested in science communication. She used this opportunity to learn more about the work of NRCC Research Associates and find new ways to share their research through social media. A recent graduate in Environmental Studies and Biology from Whitman College, Nina now lives in Bozeman, MT and spends most of her free time climbing, hiking, fishing, cooking, birding, and watering her house plants.

FINDING THE WAY FORWARD IN THESE COMPLEX TIMES

BY DR. SUSAN G. CLARK, NRCC CO-FOUNDER

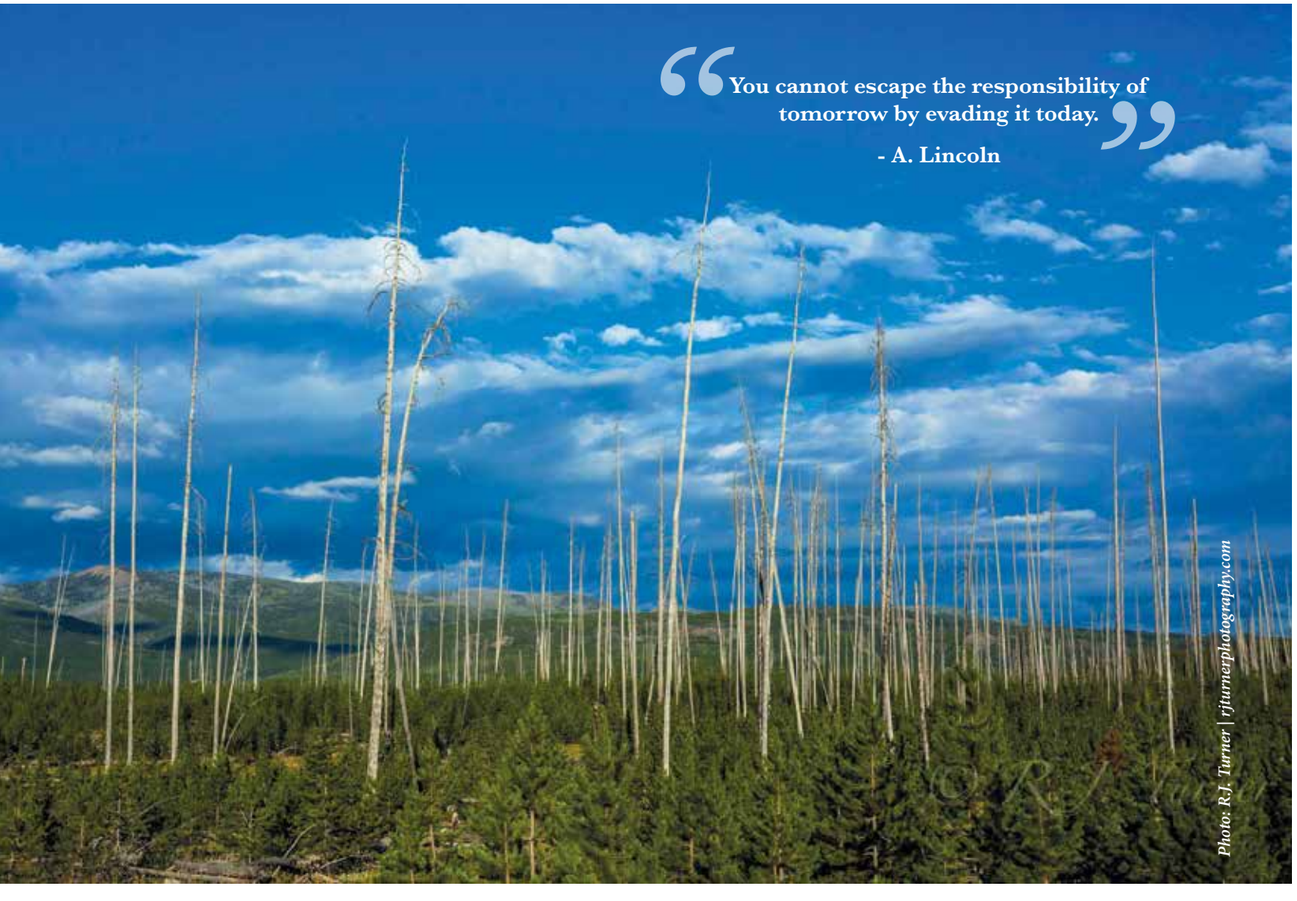
Do we hear "opportunity" knocking at the door? Will we recognize and accept the invitation it offers? And, will we rise to the occasion to secure the healthy human and environmental future we want for our children and ourselves in this exceptional place and time?

Times of crisis help us understand the need to move more quickly in certain directions. NRCC is pathfinding, shaping ways forward through the complexity and growing crises, towards the future we want. What am I talking about? What is the opportunity? Why is it an invitation? And what should we do?

WHAT IS THE OPPORTUNITY?

The key question is how should we respond to the "knocking" and opportunity before us? The most significant and often overlooked factor to consider when opening the door, is what we bring in our values, understanding, and responsibility (inside us). What do we value? What are we willing to do? Do we know why? And, when must we take action?

In a recent op-ed in the *Jackson Hole News & Guide*, I laid out the opportunity. I said, the opportunity is about advancing two great principles our society is founded on. First, what we are working for in the great American enterprise is best expressed in our founding document: "All men are created equal . . . with certain unalienable rights." For the 250 years since these words were written, we've struggled to actualize them. Today there is a groundswell demand to find a judicial way to embody this principle in the lives of citizens who have not been entirely accorded those rights. It remains the democratic and social challenge of our times.



Second, is the principle of protecting a healthy natural environment. This principle is so fundamental that it's often taken for granted. In fact, it underlies the first principle. Like breathing, ecological functioning appears to happen automatically in the background of our living. We act as if landscapes, watersheds, and wildlife are static entities that will remain healthy even if we don't tend to their health or take responsibility for our actions that affect them. Consequently, mounting pollution, loss of wildlife, and harmful problems – all complex – are rapidly increasing and are now obvious.

These two principles are about who we are as humans – how we want to see ourselves and treat each other – and what our relationship to nature and wildlife should be. The opportunity before us is to engage seriously, urgently, and constructively with these interconnected principles – wherever we live and work.

WHY IS IT AN INVITATION?

Through the door that we are about to open is "complexity," and it is entering by begging for our attention. The invitation is asking us to help ourselves deal with this complexity, as paying attention to it is the only path to secure the kind of healthy future we all want.

We experience complexity as things getting out of hand – out of our comprehension. Most of us are anxious about the turmoil in our society and the present world, which is unprecedented in our lifetimes. We are confronted with crises, among them COVID-19, economic stress, justice issues, education disruptions, environmental concerns ranging from wildlife loss to climate-fires, floods, and storms, government dysfunction, national security threats, and leadership and democratic conflicts.

Anne Applebaum's 2020 *Twightlight of Democracy* speaks to this last concern when she writes, "Democracy itself has always been loud and raucous, but when its rules are followed, it eventually creates consensus. The modern debate does not. Instead, it inspires in some people the desire to forcibly silence the rest." How we deal with all these issues will determine the kind of life we and our families and friends can live.

The current invitation is really an offer for a seat at the civic table in this "reflexive moment." A reflexive moment encourages a reconsideration of past developments and future possibilities – from the individual on up to our collective planetary situation. The most challenging issues before us are likely how we will make sense of the complexity and organize ourselves socially to advance justice and farsighted natural resource use.

AND WHAT SHOULD WE DO?

First, we can individually, if we so choose, do a "rethink" of how we live and act – in personal, civic, and environmental terms – all directed at a healthy human and environmental future. To engage this way requires open-mindedness, self-awareness, civic spirit, and farsightedness. Second, we can dialogue with one another about our understanding of how we fit into the world and how decisions should be made in our democracy, and by whom. Third, we can act – do something. There are many opportunities to engage.

For us to make sense of today's complexity, we need a systematic, pragmatic, democratic way that allows us to "connect the dots" – to get a true picture of our shared interests and what is rushing out of our future, if we do nothing. We need a way to understand and integrate what many diverse people, groups, and interests are saying about today's complexity. If we don't hear and act on these suggestions, the only path before us is the metaphoric out-of-control speeding truck barreling down Teton Pass. It's a big task to be sure, but there are many small, regional, and local opportunities to do what is needed.

TAKING ACTION

We at NRCC are action takers, clear about who we are, what we are trying to do, and how to work cooperatively with diverse others to bring in the kind of future we want. We at NRCC have worked for decades through field work, education, leadership, and policy to light the path forward. We are legitimately path-finding a collective way to a common good for humans and non-humans. We have harvested the lessons of the past, written and educated widely about what works and why, and labored to apply lessons through foresight and action.

All of us created the mess we are in, and only we can learn our way out. We need to be functional, firmly grounded in fundamentals, and use analytic methods to work through problems constructively – actively co-learning as we go. Those of us who created NRCC as an organization, network, and multifaceted leadership process, did so anticipating at least some of the complexity we now face. We are making positive contributions across endangered species, ecosystems, large carnivores, migrations, and many other on-the-ground cases. We do so through sound science, strong democratic process, clear problem-solving skills, education, leadership, and dialogue. Join with us in this vital work.

Susan G. Clark is the Joseph F. Cullman 3rd Professor of Wildlife Ecology and Policy Sciences at the Yale School of the Environment. She is also the Co-Founder and an Emeritus Board member of the Northern Rockies Conservation Cooperative. Susan has worked in the American West for over 50 years.

A SUMMER 2020 WEBINAR SERIES: LESSONS FROM THE FIELD IN A TIME OF RAPID CHANGE & CRISIS

This past summer brought a resurgence in the Covid-19 pandemic and a litany of related crises. During unprecedented times like these, we at NRCC are reminded of the basic need to connect and learn from the perspectives of our fellow citizens. From people who are working on the ground — straining to make sense of the world's complexity — and who have a vision for a future where our human and non-human communities coexist with dignity.

Here in the Greater Yellowstone Ecosystem, the pandemic has magnified the privilege and responsibility we have to steward these landscapes and the people who live within them. The question is then how we as leaders can become the agents for the future we all want to see.

We organized this summer webinar series for NRCC's leaders to share the lessons from their years of experience in different contexts — from the Northern Rockies to Mongolia to virtual online spaces. We asked them the same five questions, and encouraged them to explain their unique approaches to problem solving. In elevating these voices, we hope that others will come away with a better understanding of the actual problems at hand, in our communities in the GYE and globally as well.

The following is a recap of the insights shared in this series. We extend our appreciation to all the speakers and all who attended the events.

You can watch the recordings of the series at our website here: www.nrccooperative.org/summer-webinar-series

KATIE SHEPHERD CHRISTIANSEN

NRCC ARTIST IN RESIDENCE

WILD FOUNDATION

LAFAYETTE, CO

"One of the ways that I think about self-reflection is to think about what assumptions I'm making that are affecting the way I go about my life and worldview. And how this worldview is contributing to a future that I want to realize for all of us."

"Without integrating and understanding the problems we face, I fear that we are going to be addressing the wrong kind of problems."

"Get to know people outside of your current social circle. And genuinely try to get to know new perspectives and ways of being, worldviews, and build community around that. It's a great way to build empathy and perspective and an awareness of your own social environment."

JESSE BRYANT

NRCC RESEARCH ASSOCIATE

YALE SCHOOL OF THE ENVIRONMENT

NEW HAVEN, CT & JACKSON, WY

"One of the failures of our democracy right now is a lack of imagination, both in what is possible in the policy world but also in our imaginative capacity to understand the real lived experience of our fellow Americans. I think the best way to learn with and for other people is the arts and humanities."

"Being interdisciplinary is an active action, where you bring multiple perspectives into a room, to work towards an imagined goal."

"With climate change, my generation is going to deal with many lose-lose outcomes, in regard to quality of life. But I have hope in the sense that profound tools, like the internet and else, can be used to create a more collaborative species on the globe than ever before."

HANNAH JAICKS

NRCC RESEARCH ASSOCIATE

FUTURE WEST

BOZEMAN, MT

"You have to understand facts in [the] social, political and ecological context [in which] they're being used. If you want to address challenges on the ground, you need to know what that context is and consider the possibility that there is more to the story than just the extremes of any conservation challenge."

"It's important to introduce the possibility that there's more than one way to approach an issue."

"Stay open in the process. For the longest time, I thought the way I looked at the world was problematic. My nontraditional approach to my work is the thing I take the most pride in. Respect and value your process. If you don't fit into a single box, that doesn't mean it's a bad thing, but that you are yourself."

RICHARD READING

NRCC RESEARCH ASSOCIATE

BUTTERFLY PAVILION

DENVER, CO

"If you don't bring an interdisciplinary model, then you're not getting at the roots of the problem."

"One of the best ways to advance conservation all over the world is to empower women. Women think about what kind of future their child will be raised in."

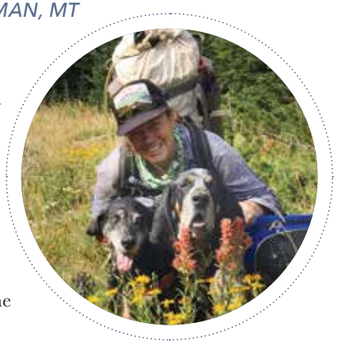
"We can't forget about the fact we're living in a biodiversity crisis. If we don't make that apparent to more people, we're going to face a crisis worse than the climate or Covid crisis because it means a collapse of our system that life is based on. We need a groundswell of movement and organizers addressing the importance of biodiversity and what it means for life on this planet."

MOLLY LOOMIS TYSON

NRCC RESEARCH ASSOCIATE

WRITER

VICTOR, ID & BOZEMAN, MT



"A lot of people define their relationship to the outdoors as a recreation thing. But everyone needs access to food and water, which are critical for all. That is a relationship to nature too. We have a right and responsibility when we engage with the outdoor world."

"Culture is important in times of crisis. If you align with the culture that you choose to be a part of – whether that be work, family, or friends— it can be a guide in helping you make decisions."

"We must see how everyone has a different perspective and how radically different those perspectives can be."

REBECCA WATTERS

NRCC RESEARCH ASSOCIATE

WOLVERINE FOUNDATION

BOZEMAN, MT

"Everything functions on reciprocal relationships, nothing should be strictly transactional. You need to make sure those flows of good will and relationships remain strong."

"We can look laterally across at our fellow citizens, whether that be Black Lives Matter or the movement at Standing Rock, and we can see a different kind of leadership emerging. These are groups that are putting together a coherent narrative that includes justice for groups that have been marginalized. As a whole, we don't have a unifying narrative yet, but the pieces are there."

"Use your imagination to envision the future you want to live in, not just the apocalypse that we're living through. Push your imagination to the world that you're living towards."

THE LAND OF INTERPRETATIONS

BY KATIE SHEPHERD CHRISTIANSEN, NRCC ARTIST IN RESIDENCE

Among many identities, I am an artist. I paint images of wildlife using watercolor. To create my art, I deconstruct the subject – a wren, a trout, an owl's nest – into minute swaths of color and texture. Then stroke by stroke, I build back the subject's form to exist on my page as a sum of entangled parts.

Each wildlife portrait is a symphony of shapes and colors, a collection of countless strokes of my paintbrush, a community of interacting elements. An ecosystem interpreting an ecosystem.

In 1935, British ecologist Sir Arthur George Tansley coined the term "ecosystem" to mean an ecological community: *the function and structure of life* and the environment supporting it. The introduction of the ecosystem concept by Tansley and contemporaries transformed our understanding of the natural world. Ecosystems gave us a view of nature as an interconnected community, dynamic and evolving, yet occurring within structured processes that tend to maintain the system as a whole. Though revolutionary at the time, Tansley's ecological insight provided only half of the story. The ecosystem concept told us something about the world, but not what we should do about it.

While scientists explored this new framing of nature, philosophy professor Aldo Leopold began work on what would become one of conservation's foundational texts: *A Sand County Almanac*. Published in 1948, the book urges a revisiting of the concept of community. Leopold's "Land Ethic" expands community values beyond the confines of a single species – *Homo sapiens* – so that the community to which one engages also includes the likes of plants, animals, water, and soils – an ecosystem.

To Tansley's scientific revelation of ecosystems, Leopold gave us an ethical framework. The land ethic captures a moral responsibility in the preservation of community. In Leopold's words, "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise." Leopold translated "ecosystem" from an idea existing beyond one's immediate reference to a meaning imbued with values and corresponding action.

Values and ethics influence how we make sense of what we encounter in life: ourselves, other people, ideas, relationships, nature. These value-determined interpretations of life (in which we engage constantly, usually subconsciously) inform how we – individually and as societies – navigate life through our thoughts and actions.

An "ecosystem" is not just a sterile biological concept. Both the physical ecosystem and the idea of one are outlets for discovering meaning in each of our lives. One's personal interpretation of an ecosystem will be influenced by one's understanding of self, of nature, and of community. Our values are the lens through which we see and translate the world into a meaningful whole.

Philosophers like Leopold, and writers, educators, community leaders, and advocates, even scientists and elected officials, are all value translators. These are the architects of the future we create together.

I am an artist, and so too I am a value translator.

My artwork is an outward expression of who I am and the values I hold. Inherent to my paintings is a specific interpretation of the natural world. I weave values of nature and community into every piece, translating the natural world from concept to meaning through a visual image. My paintings offer alternative ways of connecting to nature: connections of beauty and awe, of awareness and recognition, of respect and responsibility. I paint to influence our shared values in a land ethic – a value commitment that I believe is nothing less than essential for maintaining life on earth.

Here in the Greater Yellowstone Ecosystem, divergent and competing value translations compromise the potential to realize a shared community ethic. In the absence of a collective vision for surviving together in this ecosystem, let alone on this planet, our attempts to realize a sustainable future will forever fall short of our goal.
The future of the Greater Yellowstone is endangered by ever-expanding human development, intensifying tourism, corrosive extractive industries, unrestrained outdoor recreation, harmful pressures on wildlife, in-motion climate change, and continued biodiversity loss. How individuals and institutions make meaning of these 22-million acres, and the life and environment interacting across it, are determining this ecosystem's chances of survival.

Are our interpretations of this place up for these enormous challenges? Or are they carrying us towards inevitable ecological disintegration, threatening the health of human and wild communities alike?
I believe misaligned values are leading us down a path of destruction. However, if we choose it, we may yet hop a trail towards a different future.

The intractability of the values-problem we face in the Greater Yellowstone is that it's obscured by seemingly simpler problems in the foreground. The masquerading values-problem registers as a physical wildlife problem (solved by removing a barrier fence), a management problem (improved by making better decisions), a coexistence problem (addressed by removing houses in migration routes), even a climate problem (lessened by wildfire preparedness). And so we focus on solving these apparent problems, believing we are taking care of the real business at hand. This work is important, but problem-solving exclusively at this level ignores the deeper values-problem and prevents us from making any real headway on the crisis before us.

As much as we try, we can't get at what underlies this crisis by only attending to these misidentified, superficial problems. At the heart of this crisis is a deep chasm between our values today and the practical thinking required for our survival. Attending to this must become the thrust of our efforts.

We must get going and we must go deep, beginning with a clear acknowledgment of the challenge that value conflicts present, and moving onto a ground-level resorting of values in society and policy, from the individual to the institution. Only through values work can we hope to unravel the destructive habits of thinking that have led to our current, unsustainable ways of living on this finite planet.

Transforming our understanding of ourselves and of nature can bring us together around a land ethic, such as the one envisioned by Leopold: "a shared vision for how we engage with the world in order to survive on it."

I am an artist and a value translator.

I am also a mother.

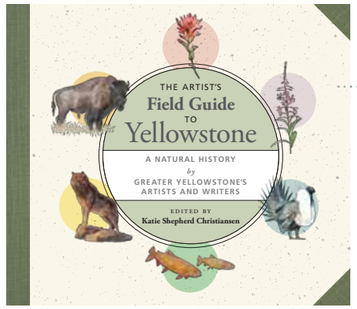
The world occurring around my infant son is in turmoil — a global pandemic, climate-change impacted weather events, existential crises on our doorsteps, the breakdown of democracies, societies verging on collapse, rampant disregard for human dignity — all as my son takes his first steps and vocalizes interpretations of his world, "Mama," "Dada," "Ball."

"Mama."

I am reminded that in the face of what seems impossible, we must remain diligent and urgently attend to our survival on earth.

I am a mother, and so too I am a value translator.

I deconstruct the world so my son can see nature's interacting, incommutable parts. Then, in time, we will build back to the whole, complicated, tangled web that is life: his community — his ecosystem.



The Artist's Field Guide to Yellowstone: A Natural History by Greater Yellowstone's Artists and Writers, published by Trinity University Press and edited by Katie Shepherd Christiansen, will be released Spring 2021. For more information about this long-awaited publication and to purchase the book, please visit NRCC's website.

« Katie's illustration of nesting Chipping Sparrow created for a forthcoming Sacajawea Audubon interpretive installation.

NRCC's Artist in Residence, Katie Shepherd Christiansen works across disciplines to advance sustainable wild and human communities. In celebration of the 2020 opening of Jackson's Astoria Hot Springs Park, Katie was awarded National Endowment for the Arts funding to create a permanent, interpretive natural history artwork welcoming visitors to the park. Her naturalist artwork and interpretive writing are also newly featured this year in protected areas in Bozeman, Boulder County Colorado, and Tennessee's Wade Bourne Nature Center. Katie is Director of Conservation Strategy & Outreach at the Wild Foundation.

« Katie's 2020 National Endowment for the Arts-supported interpretive installation welcomes visitors to Jackson's newest park. Credit: Cristine Wehner

WHY WE SHOULD CARE ABOUT FOOD INSECURITY IN THE GYE

BY JESS GREENBURG, NRCC INTERN

At first glance, food insecurity may seem unrelated to NRCC's mission of "Conservation for the common Good." However, our food system – and the folks who benefit from the system – have a large impact on the natural world. Food production is one of the largest sources of the greenhouse gases that cause climate change, and food waste contributes heavily to our warming climate as well.

Many folks rely on inexpensive, processed foods in order to afford to feed themselves and their families. However, these foods contribute more to climate change and biological degradation than local, agro-ecologically produced fresh goods that are simply out of reach economically for most people facing food or income insecurity. It's also difficult to devote time and attention to advocating for or participating in efforts to protect the environment when you or your family is going hungry. And finally, food insecurity most deeply affects people of color and people who are low-income – the same folks who will bear the brunt of the effects of climate change.

This summer, I worked with NRCC Executive Director Ben Williamson to research how food insecurity is affecting those living in the GYE – particularly folks in Jackson Hole, WY. I was able to learn from people in the community who are working to fight food insecurity, and I developed a five-tier model (shown in a condensed version of these pages) for creating sustainable, secure and thriving food systems within our communities.

JESS GREENBURG

TIER 1 – Food Accessibility

The first step to creating food secure and sustainable communities is to ensure that everyone has access to enough food to feel full, satisfied, and fueled for their day. This is often easier said than done, with food prices on the rise and wages stagnant. Jackson has a multitude of programs designed to help individuals receive food. To further ensure food access, our community could increase transportation for those in need, as well as find more translators, including those who know American Sign Language, to communicate with those who feel more comfortable communicating in a non-English language.

TIER 2 – Nutrition

After ensuring access to food, the next logical step is to make sure that food is nutritious. The food we eat fuels our body and allows it to function properly, and an imbalanced diet can lead to health problems that further increase financial strain on families and result in poorer quality of life. Our local food-based organizations are conscious of nutrition, and as a community we should continue prioritizing nutrition and cooking information that isn't centered solely around weight, and instead focuses on how our bodies feel and are operating.

TIER 3 – Culturally Appropriate

Respecting, celebrating, and encouraging cultural food practices helps to establish diverse, empowered, and happy community food systems. Culturally appropriate foods are those that fit into a culture's beliefs, practices, and traditions, are enjoyable to the eater, and fall in line with cultural thoughts on health and eating. Many organizations make an effort to serve the local Latin American community, and do so by trying to provide culturally familiar foods and hiring staff who can speak Spanish. We can continue this progress by finding more ways to incorporate more food traditions into our menus and food assistance programs. Starting with our Latin American community is a vital step, but there are also other folks who need food that respects their traditions – such as those following religious diets and our Native neighbors. Organizations and programs can work with business owners in the communities they are helping to source culturally relevant foods in order to enrich the local economy and provide authentic foods. Additionally, when discussing nutrition or weight, we must remember that Western standards of beauty and health are not the only standards of beauty and health. Individuals, families, and communities have their own goals for their health and knowledge of what foods are good for their bodies and spirits, and this knowledge should be incorporated into nutritional advice.

TIER 4 – Empowerment

There has long been stigma surrounding accepting food assistance, and many folks have been disempowered by our current food system and face pervasive barriers to feeding themselves and their families long-term. To heal and strengthen our communities, we must ensure that individuals feel empowered, valued, and that they have autonomy over their food choices. Methods for achieving this include developing programs that allow individuals to specify what foods they would like to receive, or what businesses they would like to support, in order to both give autonomy and allow folks to make a difference in their local economy.

TIER 5 – Sustainability

We need a future that is centered around local, resilient, and diverse food systems that meet the needs of our community. This future would help to create climate resiliency in our community, reduce dependency on outside food systems, end hunger, help our community be healthier, benefit our land and environment, and bring us together. We hope that this future includes the cultivation of native plants, responsible hunting and fishing, and that our neighbors will join us as we work towards these goals.

ETHICS AND PERCEPTIONS: A LOOK INTO THE RECREATION COMMUNITY OF JACKSON, WY

BY BEA PORTELA, NRCC INTERN AND BRYCE POWELL, NRCC VISITING RESEARCHER

With a flood of new residents and tourists coming to the Greater Yellowstone Ecosystem, pressure is mounting. Without an obvious release valve, the question looms: how can this area be managed to allow for the recreational habits of residents and visitors, while preserving existing ecosystems and protecting wildlife?

In the research we conducted from September 2019 to August 2020, we explored trends, conditions, and projections of recreation behaviors and attitudes in the Jackson, WY community. We also looked into the variation that exists between individuals and recreationist groups, views of access and growth, how recreationists perceive their own impacts and how these perceptions influence their own behaviors. To do this, we interviewed nine different members of the Jackson community, of all ages and years spent in the region.

For us, the most significant finding is the difference between how one defines one's own motivation to recreate and how one perceives others motivations. This finding is particularly interesting in that a preference for one type of recreation does not predict that same person's other recreational preferences (Figure 1). Said simply, there is no obvious pattern of overlap between recreational communities — a backcountry skier is not any more likely to be a whitewater kayaker or a trail runner.

Photo: Jesse Bryant

Across all activities, the most cited reason for why one personally recreates is to feel a connection to place. Yet, when describing the motivations of others, people more frequently cite daily routine, exercise, physical challenge, adrenaline, and time with friends. Many participants said they thought others recreate because of exercise or desire for an adrenaline rush, adhering to a "nature is my gym" mentality. For example, we found that people who do not participate in biking or climbing perceived that mountain bikers and climbers recreate because of the adrenaline and extremity of these sports. However, only about half of those who bike and climb acknowledged adrenaline as one of the many reasons they chose that particular activity. The strongest commonality between why a biker and climber is motivated to do these activities is adventure, exercise, and using the sport to connect with the land — nearly the same reasons for how a recreator of any activity defined their own motivations.

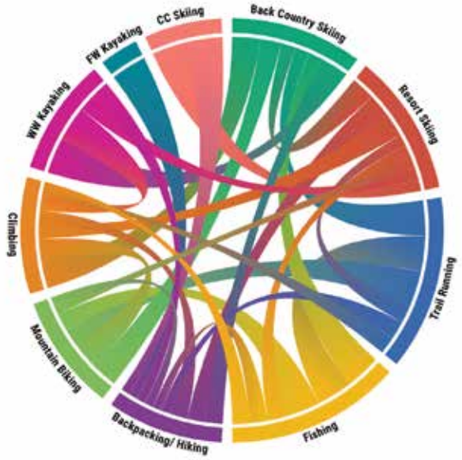


Figure 1: Participant overlap between recreational activities

This implies a growing division between how one identifies one's own motivations, and how one perceives others' motivations, regardless of activity. As other researchers have noted, this difference in perception may be the cause of growing division among user groups. Still, with the evidence that most residents participate in multiple forms of recreation — as Figure 1 illustrate —i t may be useful to avoid making assumptions of other user groups' motivations.

On the whole, most interviewees tended to fall along a spectrum of motivations for why they recreate, with one end being purely exercise and routine, and the other end representing deep spiritual connection to nature. This research is just the tip of the iceberg.

We hope this work can initiate a broader conversation about what recreation means to different people, how recreation has come to define Jackson, WY, and how that might inform our recreational planning for the future.

Bea Portela is an undergraduate at Yale College majoring in Environmental Studies and Political Science. Her interests include public lands, rural development, and water protection advocacy. This fall, Bea was a field organizer for the Colorado Democratic Party.

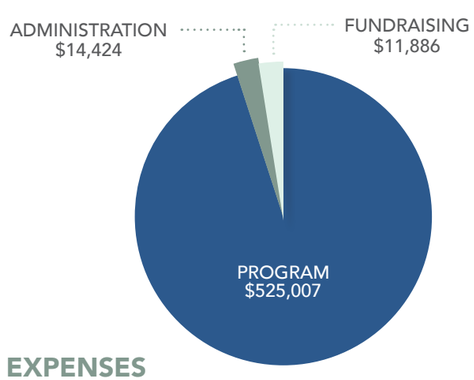
Bryce Powell is a Master of Environmental Management candidate at the Yale School of the Environment, where he is focused on public land management, conflict resolution and stakeholder engagement in the Intermountain West.

Bea and Bryce conducted this research through a partnership with NRCC and the Ucross High Plains Stewardship Initiative at the Yale School of the Environment.

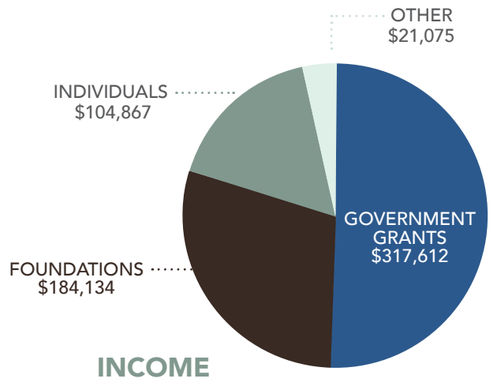
2019 FINANCIAL REPORT

NRCC is a 501(c)3 non-profit organization headquartered in Jackson, Wyoming.
Our revenue comes from a wide variety of sources including foundations, government agencies, and individuals.

In 2019, 95% of all expenditures directly supported conservation projects.



EXPENSES



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